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09/517,018	03/02/2000	Hideaki Okamura	450100-02393	4073

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EXAMINER	
TRUONG, LECHI	

ART UNIT	PAPER NUMBER
2126	14

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

P32

Office Action Summary	Application No.	Applicant(s)	
	09/517,018	OKAMURA, HIDEAKI	
	Examiner	Art Unit	
	LeChi Truong	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-14 and 17-38* is/are rejected.

7)☒ Claim(s) *5,6 and 15-16* is/are objected to.

8)☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The claims 1-38 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-2, 11-12, 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu et al (US Patent 5,572,733) in view of Wold et al (US Patent 5,386,568) and further in view of Asthana et al (5,740,384).

3. As to claim 1, Ryu teaches the invention substantially as claimed including: data processing (data processing, col 4, ln 22-35), an object oriented operating system (the method, class, col 8, ln 44-51/ function, class, col 10, ln 25-45), a plurality objects (primitive objects A, B, col 6, ln 1-67/the exiting objects, col 9, ln 12-21/ the object parts, col 10, ln 38-45), an object (class, col 6, ln 1-67/one new object, col 10, ln 10-20), a combining request message (the new process request, col 6, ln 1-67/a command link, col 10, ln 10-20), the predetermined object as a component object (the object/ the primitive object/ class, col 6, ln 1-67/ col 10, ln 10-20), a table data structure (the status table 414, col 6, ln 1-67/the command link table, col 10, ln 10-20/ second file, col 18, ln 15-30), a composite object(a composite object, col 9, ln 12-30/ composite object part, col 10, ln 38-65/ col 6, ln 1-67), registering (a part register function is a function of

registering the object parts in the parts attribute file 205, col 38-65), a message processing function (a request to use the primitive object, col 6, ln 1-13/ the new process request , col 6, ln 1-67), a relationship(relationship, col 6, ln 52-67/ col 18, ln 20-60/ fig. 13A, 13 B), the message interface(the class available and constants, instances corresponding to each of the classes, col 6, ln 29-67/ the method indicated by the class, col 10, ln 30-67/ plurality of methods, col 14, ln 1-21). Ryu's reference teaches a function of adding modifying and deleting the attribute related to the formation of the class. Those register functions are a function of registering the object parts of class which has the relationship with the object commands. Mover over, the Fig 13A, 13 B clearly explain the relationship between the function and interface in the data structure.

4. Ryu does not explicit teach the step of the data structure for component object, message interface. However, Wold teaches the step of the data structure for component object, message interface (a table, input data structure, input/ output, col 2, ln 40-68).

5. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ryu and Wold because Wold's "a table, input data structure, input/ output" would store or define location for necessary information for linking between software objects.

6. Ryu and Wold do not teach composite object has a thread and each component object of said composite object uses that thread for communication with one another. However, Asthana teaches composite object has a thread and each component object of said composite object uses that thread for communication with one another (one or more basic service may be combined with in a complex service known as an aggregate service. Aggregate service has own thread which coordinates the invocation of the basic service, col 4, ln 23-30/ the basic service tied

together by a control thread that coordinated the interactions between the basic services, col 6, ln 8-35).

7. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ryu, Wold and Asthana because the Asthana's "one or more basic service may be combined with in a complex service known as an aggregate service. Aggregate service has own thread which coordinates the invocation of the basic service" would provide the control and logic information needed to combine the services and provide the necessary infrastructure.

8. **As to claim 2**, Ryu teaches a name of said component, a number of message interface (the names of the object parts, col 10, ln 57-64), a processing function (a schema function, col 10, ln 25-32/ function, col 10, ln 58-64).

9. **As to claim 11, 12, 21**, they are apparatus claim of claims 1, 2; therefore, they are rejected for the same reasons as claims 1,2 above.

10. Claims **3-4, 7- 10, 13-14, 17-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu et al (US Patent 5,572,733) in view of Wold et al (US Patent 5,386,568) in view of Asthana et al (5,740,384) and further in view Kavner (US Patent 6,430,607 B1)

11. **As to claim 3**, Ryu teaches a specific execution (execution process data 214, Fig 10/ col 10, ln 1-5/ col 12, ln 5-13), executes message processing (a transmitter/ receiver 219, fig 10/ col 12, ln 5-13).

12. Ryu, Wold and Asthana do not teach a thread for execution processing. However, Kavner teaches a thread for execution processing (the same client thread executing on the clients process 102/thread of execution (col 4, ln 5-10).

13. It would have been obvious to one of the ordinary skill in the art at the time invention was made to combine the teaching of Ryu, Wold, Asthana and Kavner because Kavner's the same client thread executing on the clients process 102/thread of execution would transfer message between the plurality client applications on the client processor 102 and server applications using a shared thread and to reduce the complex of a multi-thread remote procedure call system and a high level of expertise about the operational details of the operating system.

14. As to claim 4, Ryu teaches a request (a command link, col 10, ln 10-20), a predetermined component object (new object/ the object, col 10, ln 10-20), composite object (composite object part, col 10, ln 38-64), register X (the combination of the meta data 202, real data 203, col 10, 10-20/ function of registering the object part, col 10, ln 58-64), table data structure (a command link table, col 10, ln 10-20).

15. Ryu does not explicit teach X as the data structure for component object. However, Wold teaches a table, input data structure (col 2, ln 40-68).

16. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ryu and Wold because Wold's a table, input data structure would store or define location for necessary information to link between software objects.

18. **As to claim 7,** Ryu teaches time(time movements, col 8, ln 1-3), the component object (sessions, col 8, ln 1-3), in parallel/processing of another message(parallel processing , col 8, ln 1-3).

19. **As to claim 8**, Ryu teaches a request (" part combine" function, col 10, ln 25-45), composite object (composite object part, col 25-45), deleting registration (delete the schema related, col 10, ln 25-45).

20. **As to claim 9**, Ryu teaches message transmitted (message passing, col 3, ln 1-5), non-composite object (a primitive object, col 3, ln 11-65), component object (the objects, col 3, ln 1-18).

21. **As to claim 10,** Ryu, Wold and Asthana do not explicit teach does not switching over an execution thread. However, Kavner teach does not switching over an execution thread (a single thread, col 4, ln 5-10).

22. It would have been obvious to one of the ordinary skill in the art at the time invention was made to combine the teaching of Ryu, Wold, Asthana and Kavner because Kavner's a single thread would prevent the switch over an execution thread because there is a single thread for executing multiple requests.

23. **As to claim 13-14, 17-20,** they are apparatus claims of claims 3-4, 7-10; therefore, they are rejected for the same reason as claims 3-4, 6-10 above.

24. Claims **22 - 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu et al (US Patent 5,572,733) in view of Kavner (US Patent 6,430,607 B1)

25. **As to claim 22,** Ryu teaches object (object, col 10, ln 10-20), message (message, col 3, ln 1-5), a composite object (composite object part, col 10, ln 10-45/ col 3, ln 12-65), one or more composite objects (the objects, col 3, ln 12-14/ one new object, col 10, ln 10-20), a standard object (the primitive object, col 3, ln 12-65), identifier (identification (ID), col 5, ln 65-67 to col 6, ln 1-19).

26. Ryu does not teach a thread for execution processing. However, Kavner teaches a thread for execution processing (the same client thread executing on the clients process 102/thread of execution, col 4, ln 5-10).

27. It would have been obvious to one of the ordinary skill in the art at time the invention was made to combine the teaching of Ryu and Kavner because the Kavner's "the same client thread executing on the clients process 102/thread of execution" would transfer message between the plurarity client applications on the client processor 102 and server applications using a shared thread and to reduce the complex of a multi-thread remote procedure call system and a high level of expertise about the operational details of the operating system.

28. **As to claim 23**, Ryu teaches message (a command link, col 10, ln 10-20), predetermined object (one new object, col 10, ln 10-20), another object (the object parts, col 10, ln 3-45), a name of object (the names, col 10, ln 10-65/ col 11, ln 60-65), an initializing method information (command link table, col 10, ln 10-20), initializing procedure (object command, col 10, ln 10-20), executing the method (the combination, col 10, ln 10-20).

29. **As to claim 24**, Ryu teaches information of object (read data, meta data, col 10, ln 10-20), a decriptor/ identifier (object ID 1/ object ID 2, col 16, ln 17-40).

30. **As to claim 25**, Ryu teaches deleted- object (deleting exiting object parts, col 12, ln 54-65), the name of the object must be deleted when the object is deleted from the composite object/ the specified descriptor is deleted (deleting the attribute related to the information, col 10, ln 25-45).

31. Claims **26-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu et al (US Patent 5,572,733) in view of Wold et al (US Patent 5,386,568) in view of Asthana et al (5,740,384) and further in view Kavner (US Patent 6,430,607 B1)

32. **As to the claims 26-36**, they are apparatus claims of claims 6, 10, 15, 22- 28, 22, therefore, they are rejected for the same reasons as claims 6, 10, 15, 22- 28, 22 above.

33. Claims **37, 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu et al (US Patent 5,572,733) in view of Wold et al (US Patent 5,386,568) in view of Asthana et al (5,740,384) and further in view of Marc H. Brown (Distributed Active Object).

34. **As to claim 37,** Ryu teaches a name (the name, col 11, ln 60-67), component object (the objects, col 11,ln 60-67), an object identifier (the object ID, col 11, ln 6067/col 16, ln 17-55), an entry table (data buffer, Fig 18), one registered relationship (a, b, c, d, e, Fig. 18), link table (collection buffer, Fig. 18).

35. Ryn, Wold and Asthana do not teach Oblets. However, Brown teaches Oblets(page 1).

36. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Ryu, Brown, Asthana and Brown because Brown's Oblets would makes it easy to write collaborative and distributed applications.

37. As to claim 38, it is an apparatus claim of claim 37; therefore, it is rejected for the same reasons as claim 37 above.

Allowable Subject Matter

38. Claims **5-6, 15-16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (703) 305 5312. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

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